

Western Washington Environmental Contaminants Program



■ Radio collared Trumpeter Swan



■ Malformed frogs



■ Restoration in Commencement Bay

Background

The Fish and Wildlife Service (FWS) has been involved with studying contaminant effects to fish and wildlife, and the habitat they rely on since the early 1950's. In 1962, a former Fish and Wildlife Service employee, Rachel Carson captured national attention with her landmark book *Silent Spring*, which outlined the widespread harmful effects of pesticides on the environment.

Who we are

We are an integrated team of fish and wildlife biologists, contaminant specialists and toxicologists who are experts on oil and chemical spills, pesticides, water quality, hazardous materials disposal and other aspects of pollution biology. Our team of contaminant specialists focuses on identifying and preventing harmful contaminant effects on fish and wildlife, and restoring resources degraded by contamination.

Who We Serve

- FWS hatcheries and refuges
- Federal agencies
- States
- Tribes
- Local governments
- Public interest groups
- Private citizens

What We Do

Spill Response

We receive numerous calls of spill events or potential releases of oil or chemicals to the environment throughout Puget Sound and Coastal Washington each year. These include vehicle accidents, maritime incidents,

train derailments, pipeline ruptures and other incidents where a release or the potential for a release has occurred.

We have a close partnership with the State authorities in responding to these incidents. We do extensive spill planning and preparation activities with the State and other Federal agencies which include geographic response and contingency planning, reviewing response technologies, and maintaining wildlife rehabilitation readiness.

Natural Resource Damage Assessment

The Fish & Wildlife Service conducts Natural Resource Damage Assessments under the authorities of the Comprehensive Environmental Response, Compensation and Liability Act, the Clean Water Act and the Oil Pollution Act of 1990.

The Western Washington Fish and Wildlife Office continues to move forward with our federal, state, and tribal co-trustees in many complex and dynamic natural resource damage assessment cases and restoration projects in Western Washington. These include cases in several industrialized marine estuaries such as Commencement Bay in Tacoma, Elliott Bay/Duwamish River in Seattle, and a former landfill site in the Snohomish River Estuary, north of Everett.

We are also involved with several damage assessment and restoration projects resulting from

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coastal oil spills, such as the *Tenyo Maru* and the *Nestucca*, and from pipeline ruptures or leaks as in the Texaco Anacortes case and the Olympic Pipe Line rupture and fire in Whatcom Creek in Bellingham. Damage assessments have also been initiated for unusual events such as a dam failure of a power canal near Cougar, Washington which destroyed a generator building and released various types of oils into upper Yale Lake.

Special Studies

Trumpeter Swan die-off

The Western Washington Fish and Wildlife Office is currently coordinating with Canadian Wildlife Service, state, federal and non-governmental organizations and environmental groups to investigate a large number of trumpeter swan deaths in Whatcom and Skagit Counties in northern Washington and Sumas Prairie of British Columbia, Canada.

Over the past six winters, more than 1500 swans were found acutely poisoned by the ingestion of lead shot. Telemetry data collected from radio-collared swans in the past years indicate that the majority of swans exposed to toxic levels of lead shot are from Washington State or Sumas Prairie, British Columbia. The areas of concern have been significantly narrowed and telemetry data from the 2002-2005 winter seasons should continue to narrow the scope of potentially contaminated sites.

Malformed Frogs

National attention began focusing on the issue of amphibian malformations in 1995 when large numbers of frogs were discovered with misshapen, extra, or missing limbs. In the subsequent years, an increasing number of frogs have been observed with severe malformations.

The Western Washington Fish and Wildlife Office has been in-

volved with a national effort to survey deformities in frogs on FWS lands nationwide. In 2001 and 2002, we conducted amphibian surveys and collected abnormal frogs from Willapa National Wildlife Refuge Complex and Nisqually National Wildlife Refuge. Efforts are underway again for 2003 to determine if these malformations are continuing.

Insecticide Impacts

Since 2002, the Western Washington Fish and Wildlife Office has been investigating the sub-lethal effects of the broad spectrum insecticide carbaryl, used since 1963 to control burrowing shrimp in some of Washington's coastal estuaries. Burrowing shrimp have been an ongoing threat to the state's oyster industry because of the alteration they cause to oyster beds. Although effective in controlling burrowing shrimp, carbaryl is lethal to many non-target species such as juvenile Dungeness crab, and may impair the health of several anadromous fish species such as coastal cutthroat trout. We are continuing to investigate these impacts and provide resource managers adequate information to modify their carbaryl application practices if warranted.

Sea Otters

During the years of 2000 and 2002, resource agencies recorded about 25 unexplained sea otter deaths in Washington State. Concern over these deaths led the Western Washington Fish and Wildlife Office, along with several other partners, to develop a study to assess the overall health, movements and distribution of sea otters located along Washington's Outer Coast. Since 2001, 33 sea otters were captured and 28 were implanted with radio-transmitters. Tissue and blood samples were taken from the animals to be analyzed for contami-

nant residues. This information will be used to assess the overall health of the individuals captured and provide insight into the cause of the sea otter deaths while contributing towards sea otter recovery efforts in Washington.

Technical Assistance

Pesticide Issues

We participate on an interagency technical task force to evaluate scientific data and provide science-based guidance to natural resource and regulatory agencies on the potential adverse effects of current pesticide use on federally-listed species such as salmon and bull trout, and on aquatic ecosystems. Our participation on the task force helps facilitate the on-going Endangered Species Act national consultation process on pesticide registration by focusing on a smaller number of pesticides used in Washington State, and fewer listed species and exposure pathways.

"It was a spring without voices. On the mornings that had once throbbed with the dawn chorus of robins, catbirds, doves, jays, wrens, and scores of other bird voices there was now no sound; only silence lay over the fields and woods and marsh."

From: Rachel Carson's *Silent Spring*